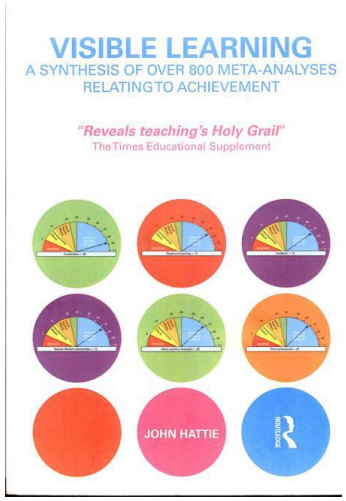
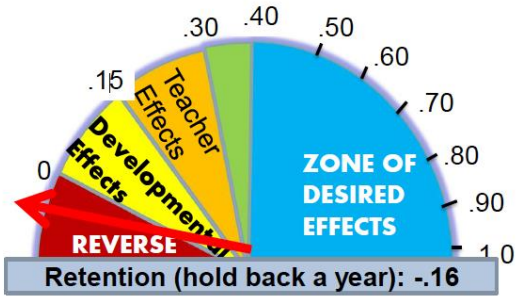


Visible Learning
- Results -



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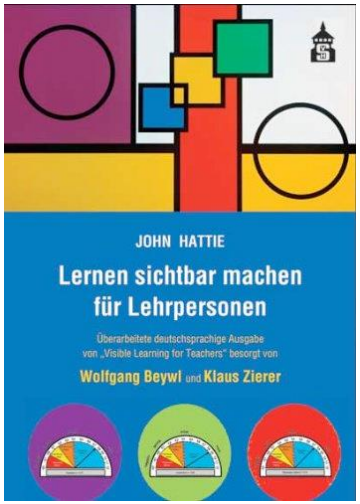
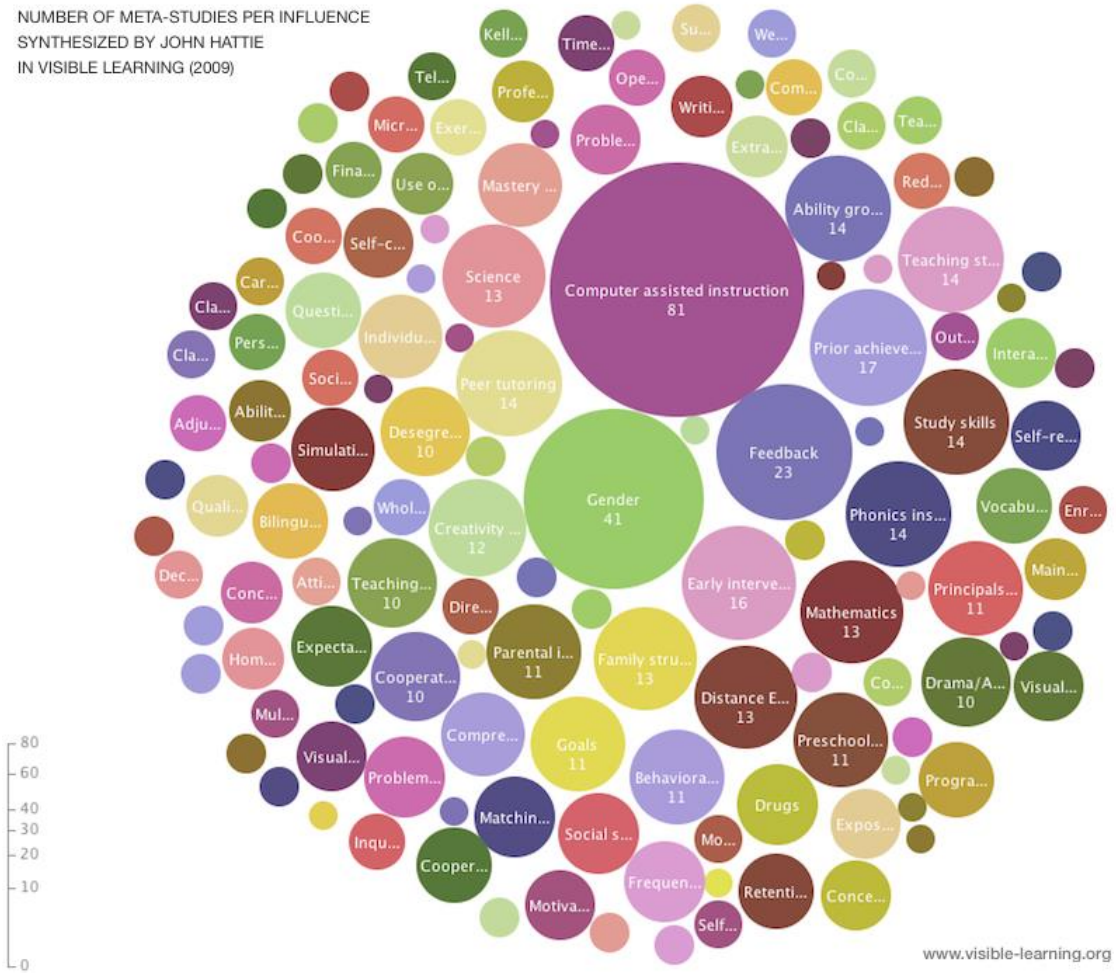
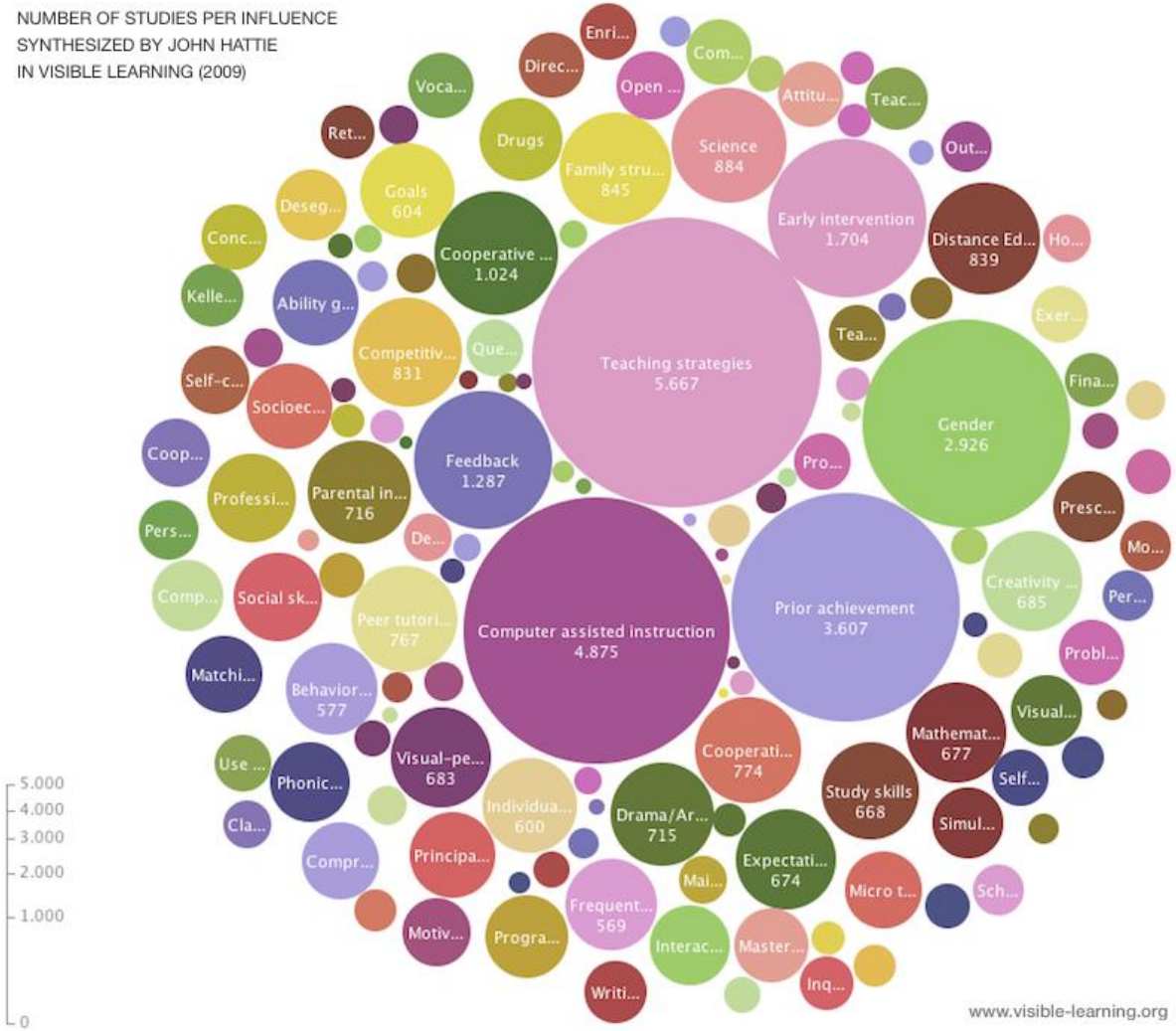


Results

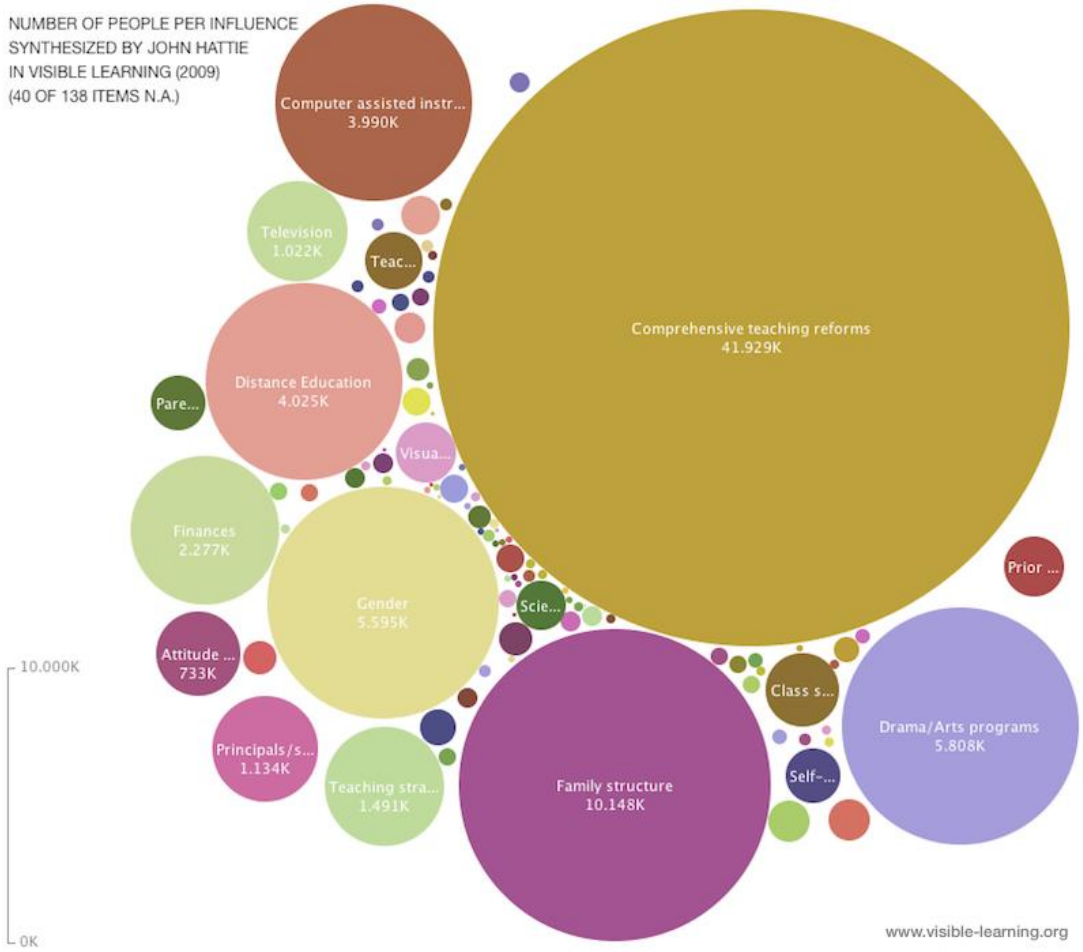
How many meta-studies has John Hattie synthesized for each of the 138 influences?



How many underlying studies has John Hattie synthesized for each of the 138 influences?



What is the underlying number of people studied for each of the 138 influences?



The Disasters ...

Rank	Influence	Studies	Effects	ES
130	College halls of residence	10	23	.05
131	Multi-grade/age classes	94	72	.04
132	Student control over learning	65	38	.04
133	Open vs. Traditional	315	333	.01
134	Summer vacation	39	62	-.09
135	On Welfare Policies	8	8	-.12
136	Retention	207	2675	-.16
137	Television	37	540	-.18
138	Mobility	181	540	-.34

The Disasters ...

Rank	Influence	Studies	Effects	ES
120	Mentoring	74	74	.15
121	Teacher education	85	391	.12
122	Ability grouping	500	1369	.12
123	Gender	2926	6051	.12
124	Diet	23	125	.12
125	Teacher subject matter knowledge	92	424	.09
126	Distance Education	839	1643	.09
127	Out of school curricula experiences	52	50	.09
128	Perceptual-Motor programs	180	637	.08
129	Whole language	64	197	.06

The Disasters ...

Rank	Influence	Studies	Effects	ES
110	Learning hierarchies	24	24	.19
111	Co- Team teaching	136	47	.19
112	Web based learning	45.3	136	.18
113	Family structure	845	1733	.17
114	Extra-curricula Programs	102	68	.17
115	Teacher Immediacy	16	16	.16
116	Within class grouping	129	181	.16
116	Home-school programs	14	14	.16
118	Problem based learning	285	546	.15
119	Sentence Combining programs	35	40	.15

Not Worth it yet ...

Rank	Influence	Studies	Effects	ES
100	Finances	189	681	.23
101	Illness	13	13	.23
101	Religious Schools	71	71	.23
103	Individualized instruction	638	1185	.22
104	Visual/Audio-visual methods	359	231	.22
105	Comprehensive Teaching Reforms	282	1818	.22
106	Class size	96	785	.21
107	Charter Schools	18	18	.20
108	Aptitude/treatment interactions	61	340	.19
109	Personality	234	1481	.19

Typical “average teacher” territory ...

Rank	Influence	Studies	Effects	ES
90	Exercise/Relaxation programs	227	1971	.28
91	Desegregation	335	723	.28
92	Mainstreaming	150	370	.28
93	Teaching test taking & coaching	275	372	.27
94	Use of calculators	222	1083	.27
95	Values/Moral Education Programs	84	97	.24
96	Competitive vs. individualistic learning	831	203	.24
96	Special College Programs	108	108	.24
98	Programmed instruction	493	391	.23
99	Summer school	105	600	.23

Typical “average teacher” territory …

Rank	Influence	Studies	Effects	ES
80	Decreasing disruptive behavior	165	416	.34
81	Drugs	467	1839	.33
82	Simulations	361	482	.33
83	Inductive teaching	97	103	.33
84	Ethnicity	9	9	.32
85	Teacher effects	18	18	.32
86	Inquiry based teaching	205	420	.31
87	Ability grouping for gifted students	125	202	.30
88	Homework	161	295	.29
89	Home visiting	71	52	.29

Closer to Average …

Rank	Influence	Studies	Effects	ES
70	Time on Task	100	136	.38
71	Computer assisted instruction	4899	8914	.37
72	Adjunct aids	73	258	.37
73	Bilingual Programs	128	727	.37
74	Principals/ School leaders	491	1257	.36
75	Attitude to Mathematics/Science	288	664	.36
76	Exposure to Reading	114	293	.36
77	Drama/Arts Programs	715	728	.35
78	Creativity	21	447	.35
79	Frequent/ Effects of testing	569	1749	.34

Average

Rank	Influence	Studies	Effects	ES
60	Mathematics programs	706	2404	.43
61	Behavioral organizers/Adjunct questions	577	1933	.41
63	Cooperative learning	306	829	.41
64	Science	884	2592	.40
65	Social skills programs	540	2278	.40
66	Reducing anxiety	121	1097	.40
67	Integrated Curricula Programs	61	80	.39
68	Enrichment	214	543	.39
69	Career Interventions	143	243	.38

Average

Rank	Influence	Studies	Effects	ES
51	Motivation	327	979	.48
52	Early Intervention	1704	9369	.47
53	Questioning	211	271	.46
54	Pre school programs	358	1822	.45
55	Quality of Teaching	141	195	.44
56	Writing Programs	262	341	.44
57	Expectations	674	784	.43
58	School size	21	120	.43
59	Self-concept	324	2113	.43

Let's have them ....

Rank	Influence	Studies	Effects	ES
40	Keller's PIS programmed instruction sequence	263	162	.53
41	Peer influences	12	122	.53
42	Classroom management	100	5	.52
43	Outdoor/ Adventure Programs	187	429	.52
44	Interactive video methods	441	3930	.52
45	Parental Involvement	716	1783	.51
46	Play Programs	70	70	.50
47	Second/Third chance programs	52	1395	.50
48	Small group learning	78	155	.49
49	Concentration/Persistence/ Engagement	146	587	.48

Exciting ….

Rank	Influence	Studies	Effects	ES
30	Worked examples	62	151	.57
31	Home environment	35	109	.57
32	Socioeconomic status	499	957	.57
33	Concept mapping	287	332	.57
34	Challenging Goals	604	820	.56
35	Visual-Perception programs	683	5035	.55
36	Peer tutoring	767	1200	.55
37	Cooperative vs. competitive learning	1024	933	.54
38	Pre-term birth weight	46	136	.54
39	Classroom cohesion	88	841	.53

Among the Winners ...

Rank	Influence	Studies	Effects	ES
20	Problem solving teaching	221	719	.61
21	Not labeling students	79	79	.61
22	Teaching strategies	5667	13572	.60
23	Cooperative vs. individualistic learning	774	284	.59
24	Study skills	668	2217	.59
25	Direct Instruction	304	597	.59
26	Tactile stimulation programs	19	103	.58
27	Phonics instruction	447	5990	.58
28	Comprehension programs	415	2653	.58
29	Mastery learning	377	296	.58

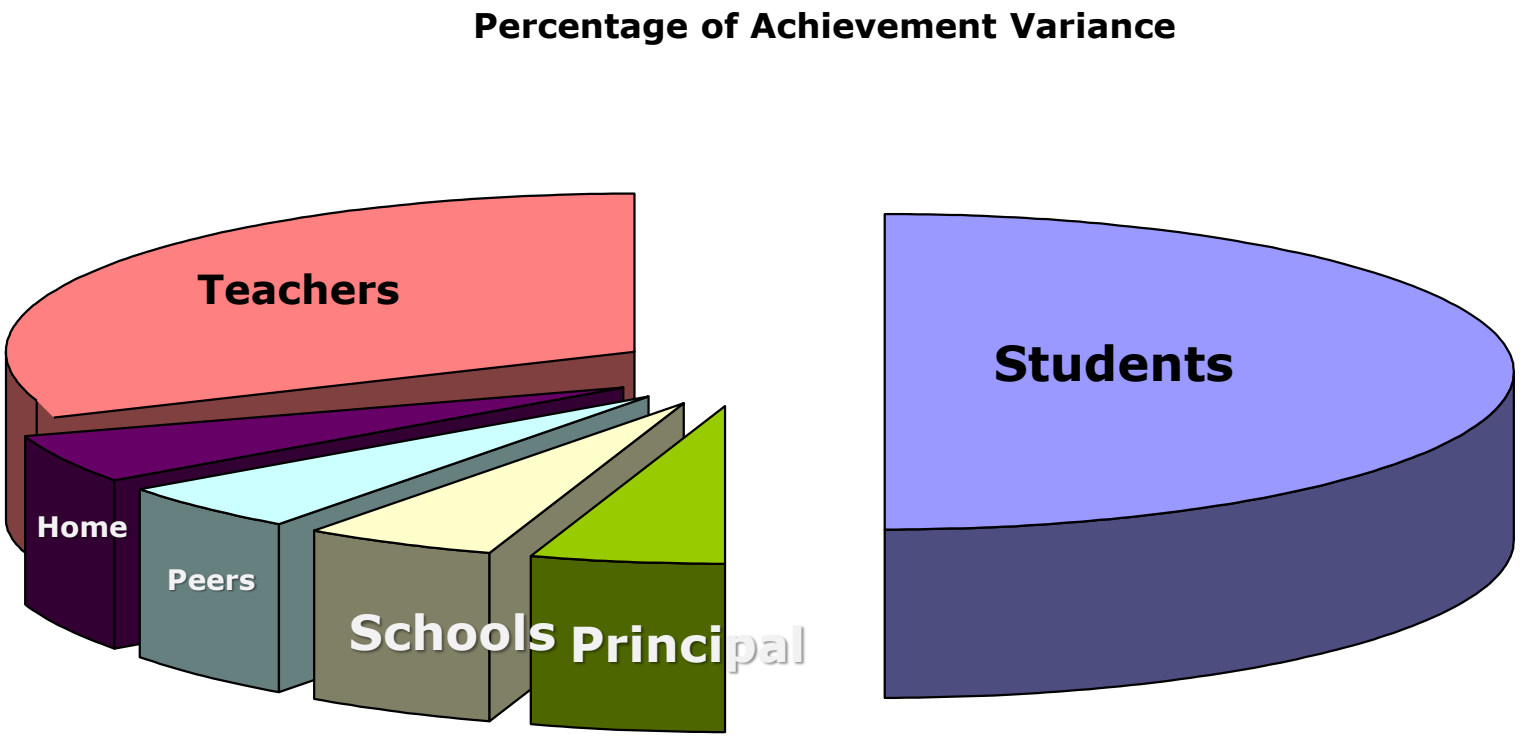
The Winners ...

Rank	Influence	Studies	Effects	ES
11	Teacher-Student relationships	229	1450	.72
12	Spaced vs. Mass Practice	63	112	.71
13	Meta-cognitive strategies	63	143	.69
14	Prior achievement	3607	9209	.67
15	Vocabulary programs	301	800	.67
16	Repeated Reading programs	54	156	.67
17	Creativity Programs	685	837	.65
18	Self-verbalization & Self-questioning	113	1150	.64
19	Professional development	537	1884	.62

The Winners ...

Rank	Influence	Studies	Effects	ES
1	Self-reported grades	209	305	1.44
2	Piagetian programs	51	65	1.28
3	Providing formative evaluation	30	78	.90
4	Micro teaching	402	439	.88
5	Acceleration	37	24	.88
6	Classroom behavioral	160	942	.80
7	Comprehensive interventions for learning disabled students	343	2654	.77
8	Teacher clarity	na	na	.75
9	Reciprocal teaching	38	53	.74
10	Feedback	1287	2050	.73

Identifying what matters



Overview

The winners ...

Rank	Influence	Studies	Effects	ES
1	Student expectations	209	305	1.44
3	Providing formative evaluation	30	78	.90
5	Acceleration	37	24	.88
6	Classroom behavioral	160	942	.80
8	Teacher clarity	na	na	.75
9	Reciprocal teaching	38	53	.74
10	Feedback	1287	2050	.73

Low to middlin'

70	Time on Task	100	136	.38
71	Computer assisted instruction	4899	8914	.37
75	Attitude to Mathematics/Science	288	664	.36

90	Exercise/Relaxation programs	227	1971	.28
99	Summer school	105	600	.23

106	Class size	96	785	.21
107	Charter Schools	18	18	.20
108	Aptitude/treatment interactions	61	340	.19
109	Personality	234	1481	.19

The disasters ...

Rank	Influence	Studies	Effects	ES
120	Mentoring	74	74	.15
121	Teacher education	85	391	.12
122	Ability grouping	500	1369	.12
123	Gender	2926	6051	.12
124	Diet	23	125	.12
125	Teacher subject matter knowledge	92	424	.09
132	**Student control over learning**	**65**	**38**	**.04**
133	Open vs. Traditional	315	333	.01
134	Summer vacation	39	62	-.09
136	Retention	207	2675	-.16
137	Television	37	540	-.18
138	Mobility	181	540	-.34

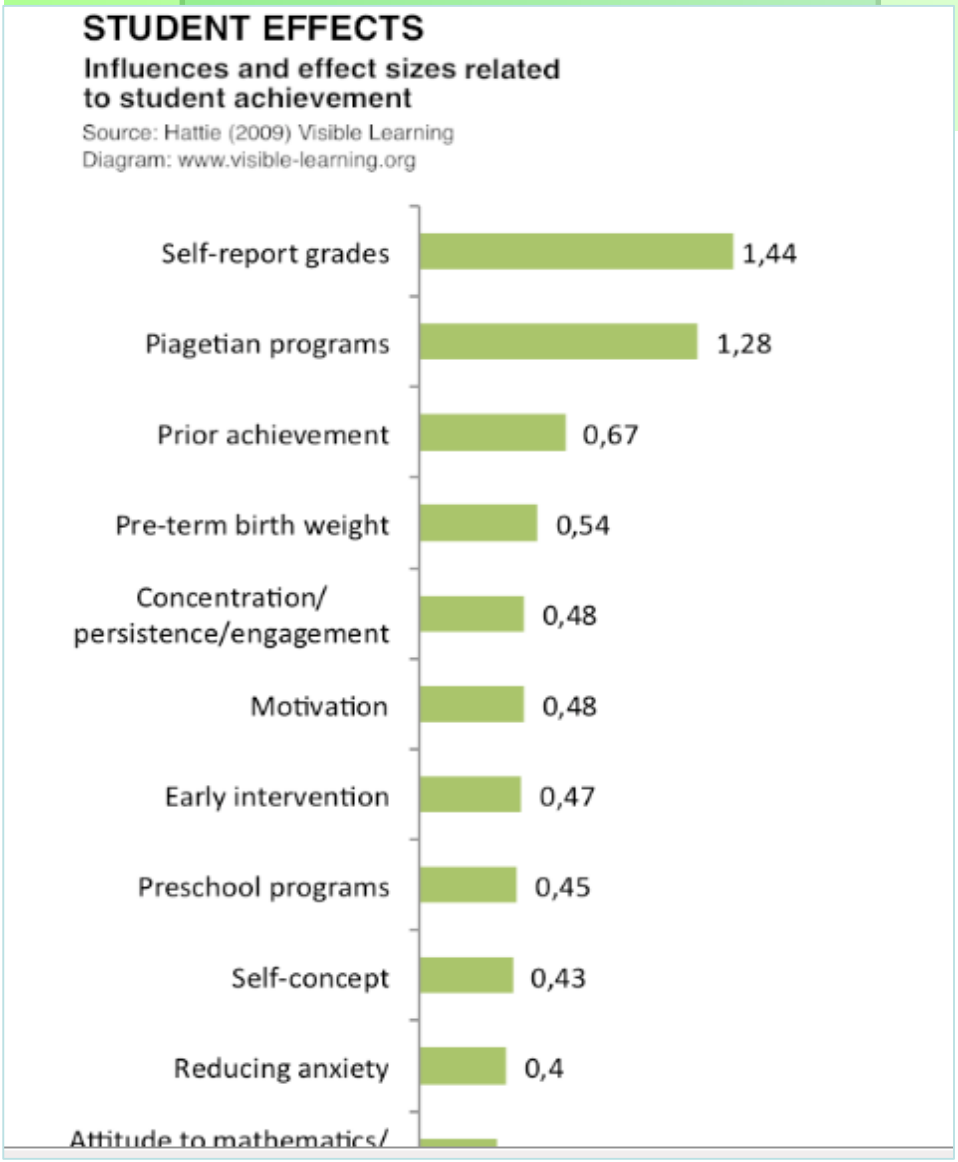
Catogirized look

on the results

Major domains/areas of impact

- Curricula
- Home
- School
- Student
- Teacher
- Teaching

Impact Ranking for each domain

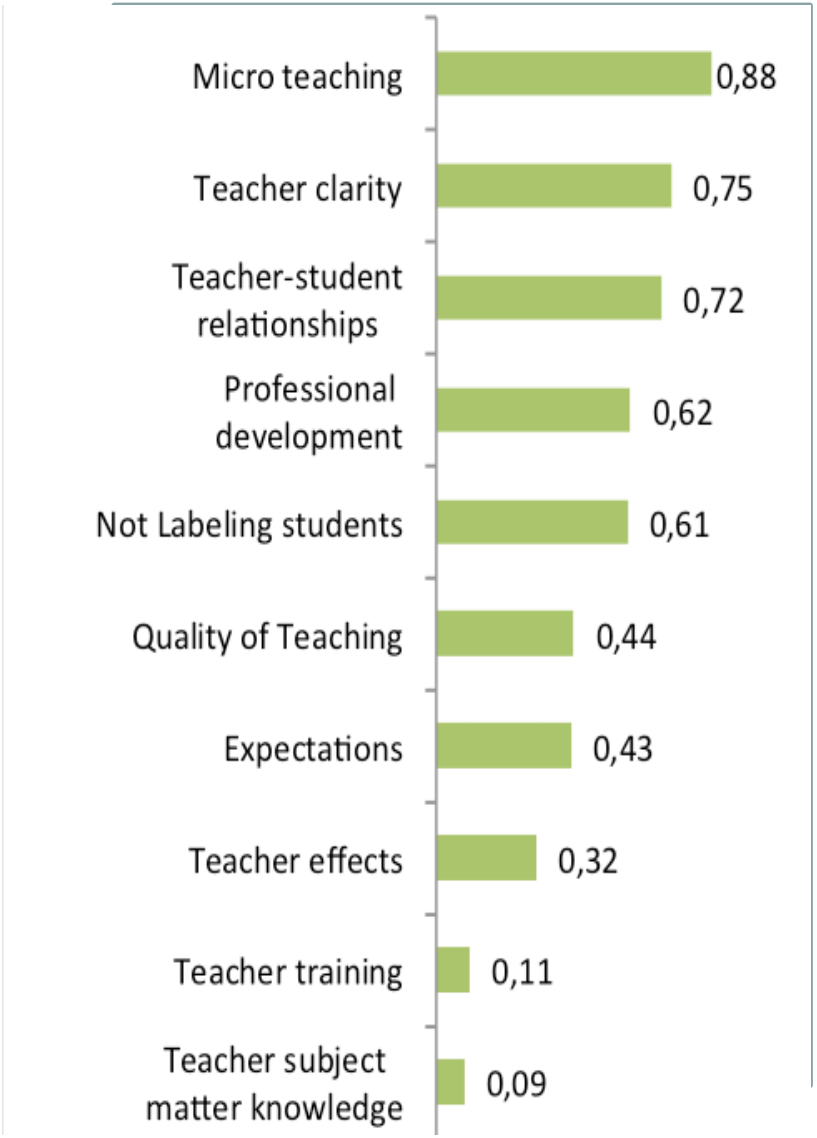


Student Domain

1.44
Self-report grades

Teaching Domain

.9 formative evaluation
.77 interventions
.74 reciprocal teaching
.73 Feedback



Teacher Effects

.88 Micro teaching
.75 Teacher Clarity
.72 teacher-student relationship
.62 Professional Dev

Typical "average teacher" territory …

Rank	Category	Influence	Studies	Effects	ES
70	school	Finances	189	681	.23
69	school	Summer school	105	600	.23
68	teaching	Competitive learning	831	203	.24
67	teaching	Programmed instruction	464	362	.24
66	school	Within class grouping	148	297	.25
65	school	Mainstreaming	150	370	.28
64	school	Desegregation	335	723	.28
63	student	Exercise/relaxation	227	1971	.28
62	teaching	Audio-based teaching	146	48	.28
61	home	Home visiting by teachers	71	52	.29

Close to average

Rank	Category	Influence	Studies	Effects	ES
60	student	Reducing anxiety	69	904	.30
59	school	Principals/school leaders on student achievement	344	1008	.30
58	school	Ability grouping for gifted students	125	202	.30
57	student	Homework	261	275	.31
56	student	Inquiry based teaching	205	420	.31
55	student	Simulations and gaming	342	449	.32
54	curricula	Reading: Exposure to reading	145	324	.36
53	curricula	Bilingual programs	128	666	.37
52	teacher	Teacher positive expectations	635	745	.37
51	teaching	Computer assisted instruction	4481	8079	.37

Average ...

Rank	Category	Influence	Studies	Effects	ES
50		Enrichment on gifted	214	543	.39
49	curricula	Integrated curriculum programs	61	80	.39
48	teaching	Adjunct aids	138	323	.41
47	teaching	Hypermedia instruction	46	143	.41
46	teaching	Behavioral organisers/adjunct questions	577	1933	.41
45	student	Self-concept on achievement	324	2113	.43
44	teaching	Frequent/effects of testing	323	1077	.46
43	student	Early intervention	1627	9050	.47
42	student	Motivation on learning	322	979	.48
41	school	Small group learning	78	155	.49

Getting there ...

Rank	Category	Influence	Studies	Effects	ES
40	teaching	Questioning	214	342	.49
39	teaching	Cooperative learning	2285	1519	.49
38	curricula	Reading: Second/third chance programs	52	1395	.50
37	curricula	Play programs	70	70	.50
36	teaching	Visual based/audio-visual teaching	468	3860	.51
35	curricula	Outdoor programs	187	429	.52
34	teaching	Concept mapping	91	105	.52
33	learning	Peer influences	12	122	.53
31	curricula	Reading: Phonics instruction	407	5950	.53

Let's have them ....

Rank	Category	Influence	Studies	Effects	ES
30	curricula	Reading: Visual-perception programs	762	5244	.55
29	home	Parental Involvement	694	1761	.55
28	teaching	Peer tutoring	767	1200	.55
27	teaching	Goals - challenging	454	671	.56
26	teaching	Mastery learning	369	284	.57
25	curricula	Social skills programs	540	3068	.57
24	home	Socio-economic status	499	957	.57
23	home	Home environment	35	109	.57
22	teaching	Providing worked examples	62	151	.57
21	curricula	Reading: Comprehension programs	365	2416	.58

Exciting ....

Rank	Category	Influence	Studies	Effects	ES
20	teaching	Direct instruction	304	597	.59
19	teaching	Time on task	64	100	.59
18	teaching	Study skills	656	2446	.59
17	school	Acceleration of gifted	60	412	.60
16	teaching	Problem solving teaching	221	719	.61
15	teacher	Teacher professional development on student achievement	450	1790	.64
14	curricula	Reading: Repeated reading programs	54	156	.67
13	curricula	Reading: Vocabulary programs	301	800	.67
12	teaching	Meta-cognition strategies	43	123	.67
11	teaching	Teaching students self-verbalisation	92	1061	.67

The Winners ...

Rank	Category	Influence	Studies	Effects	ES
1	students	Self-report grades	209	305	1.44
2	teacher	Reducing of disruptive students behavior	140	315	.86
3	teacher	Classroom behavioural	160	942	.80
4	teacher	Quality of teaching	141	195	.77
5	teaching	Reciprocal teaching	38	53	.74
6	students	Prior achievement	3387	8758	.73
7	teacher	Teacher-student relationships	229	1450	.72
8	teacher	Feedback	1276	1928	.72
9	teacher	Providing formative evaluation to teachers	21	21	.70
10	teaching	Creativity programs	658	814	.70

Results 2018

Hattie research

Latest results

Visible Learning^{plus} 250+ Influences on Student Achievement

STUDENT	ES
Prior knowledge and background	
Field independence	0.68
Non-standard dialect use	-0.29
Piagetian programs	1.28
Prior ability	0.94
Prior achievement	0.55
Relating creativity to achievement	0.40
Relations of high school to university achievement	0.60
Relations of high school achievement to career performance	0.38
Self-reported grades	1.33
Working memory strength	0.57
Beliefs, attitudes and dispositions	
Attitude to content domains	0.35
Concentration/persistence/ engagement	0.56
Grit/incremental vs. entity thinking	0.25
Mindfulness	0.29
Morning vs. evening	0.12
Perceived task value	0.46
Positive ethnic self-identity	0.12
Positive self-concept	0.41
Self-efficacy	0.92
Stereotype threat	0.33
Student personality attributes	0.26
Motivational approach, orientation	
Achieving motivation and approach	0.44
Boredom	-0.49
Deep motivation and approach	0.69
Depression	-0.36
Lack of stress	0.17
Mastery goals	0.06
Motivation	0.42
Performance goals	-0.01
Reducing anxiety	0.42
Surface motivation and approach	-0.11
Physical influences	
ADHD	-0.90
ADHD – treatment with drugs	0.32
Breastfeeding	0.04
Deafness	-0.61
Exercise/relaxation	0.26
Gender on ach[illegible]nt	0.08
Lack of illness	0.26
Lack of sleep	-0.05
Full compared to pre-term/low birth weight	0.57
Relative age within a class	0.45

CURRICULA	ES
Reading, writing and the arts	
Comprehensive instructional programs for teachers	0.72
Comprehension programs	0.47
Drama/arts programs	0.38
Exposure to reading	0.43
Music programs	0.37
Phonics instruction	0.70
Repeated reading programs	0.75
Second/third chance programs	0.53
Sentence combining programs	0.15
Spelling programs	0.58
Visual-perception programs	0.55
Vocabulary programs	0.62
Whole language approach	0.06
Writing programs	0.45
Math and sciences	
Manipulative materials on math	0.30
Mathematics programs	0.59
Science programs	0.48
Use of calculators	0.27
Other curricula programs	
Bilingual programs	0.36
Career interventions	0.38
Chess instruction	0.34
Conceptual change programs	0.99
Creativity programs	0.62
Diversity courses	0.09
Extra-curricula programs	0.20
Integrated curricula programs	0.47
Juvenile delinquent programs	0.12
Motivation/character programs	0.34
Outdoor/adventure programs	0.43
Perceptual-motor programs	0.08
Play programs	0.50
Social skills programs	0.39
Tactile stimulation programs	0.58

HOME	ES
Family structure	
Adopted vs non-adopted care	0.25
Engaged vs disengaged fathers	0.20
Intact (two-parent) families	0.23
Other family structure	0.16
Home environment	
Corporal punishment in the home	-0.33
Early years' interventions	0.44
Home visiting	0.29
Moving between schools	-0.34
Parental autonomy support	0.15
Parental involvement	0.50
Parental military deployment	-0.16
Positive family/home dynamics	0.52
Television	-0.18
Family resources	
Family on welfare/state aid	-0.12
Non-immigrant background	0.01
Parental employment	0.03
Socio-economic status	0.52

SCHOOL	ES
Leadership	
Collective teacher efficacy	1.57
Principals/school leaders	0.32
School climate	0.32
School resourcing	
External accountability systems	0.31
Finances	0.21
Types of school	
Charter schools	0.09
Religious schools	0.24
Single-sex schools	0.08
Summer school	0.23
Summer vacation effect	-0.02
School compositional effects	
College halls of residence	0.05
Desegregation	0.28
Diverse student body	0.10
Middle schools' interventions	0.08
Out-of-school curricula experiences	0.26
School choice programs	0.12
School size (600-900 students at secondary)	0.43
Other school factors	
Counseling effects	0.35
Generalized school effects	0.48
Modifying school calendars/ timetables	0.09
Pre-school programs	0.28
Suspension/expelling students	-0.20

PAGE 1 of 2 | November 2017

The Visible Learning research synthesises findings from **1,400** meta-analyses of **80,000** studies involving **300** million students, into what works best in education.

Key for rating

- Potential to considerably accelerate student achievement
- Potential to accelerate student achievement
- Likely to have positive impact on student achievement
- Likely to have small positive impact on student achievement
- Likely to have a negative impact on student achievement

ES Effect size calculated using Cohen's *d*

CORWIN | visible learning^{plus}

corwin.com/visiblelearning

STUDENT		ES
Prior knowledge and background		
Field independence		0.68
Non-standard dialect use		-0.29
Piagetian programs		1.28
Prior ability		0.94
Prior achievement		0.55
Relating creativity to achievement		0.40
Relations of high school to university achievement		0.60
Relations of high school achievement to career performance		0.38
Self-reported grades		1.33
Working memory strength		0.57
Beliefs, attitudes and dispositions		
Attitude to content domains		0.35
Concentration/persistence/ engagement		0.56
Grit/incremental vs. entity thinking		0.25
Mindfulness		0.29
Morning vs. evening		0.12
Perceived task value		0.46
Positive ethnic self-identity		0.12
Positive self-concept		0.41
Self-efficacy		0.92
Stereotype threat		0.33
Student personality attributes		0.26
Motivational approach, orientation		
Achieving motivation and approach		0.44
Boredom		-0.49
Deep motivation and approach		0.69
Depression		-0.36
Lack of stress		0.17
Mastery goals		0.06
Motivation		0.42
Performance goals		-0.01
Reducing anxiety		0.42
Surface motivation and approach		-0.11
Physical influences		
ADHD		-0.90
ADHD – treatment with drugs		0.32
Breastfeeding		0.04
Deafness		-0.61
Exercise/relaxation		0.26
Gender on achievement		0.08
Lack of illness		0.26
Lack of sleep		-0.05
Full compared to pre-term/low birth weight		0.57
Relative age within a class		0.45

Key for rating

- Potential to considerably accelerate student achievement
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- Likely to have a negative impact on student achievement

ES Effect size calculated using Cohen's *d*

HOME		ES
Family structure		
Adopted vs non-adopted care	●	0.25
Engaged vs disengaged fathers	●	0.20
Intact (two-parent) families	●	0.23
Other family structure	●	0.16
Home environment		
Corporal punishment in the home	●	-0.33
Early years' interventions	●	0.44
Home visiting	●	0.29
Moving between schools	●	-0.34
Parental autonomy support	●	0.15
Parental involvement	●	0.50
Parental military deployment	●	-0.16
Positive family/home dynamics	●	0.52
Television	●	-0.18
Family resources		
Family on welfare/state aid	●	-0.12
Non-immigrant background	●	0.01
Parental employment	●	0.03
Socio-economic status	●	0.52

SCHOOL		ES
Leadership		
Collective teacher efficacy	●	1.57
Principals/school leaders	●	0.32
School climate	●	0.32
School resourcing		
External accountability systems	●	0.31
Finances	●	0.21
Types of school		
Charter schools	●	0.09
Religious schools	●	0.24
Single-sex schools	●	0.08
Summer school	●	0.23
Summer vacation effect	●	-0.02
School compositional effects		
College halls of residence	●	0.05
Desegregation	●	0.28
Diverse student body	●	0.10
Middle schools' interventions	●	0.08
Out-of-school curricula experiences	●	0.26
School choice programs	●	0.12
School size (600-900 students at secondary)	●	0.43
Other school factors		
Counseling effects	●	0.35
Generalized school effects	●	0.48
Modifying school calendars/ timetables	●	0.09
Pre-school programs	●	0.28
Suspension/expelling students	●	-0.20

Key for rating

- ● Potential to considerably accelerate student achievement
- ● Potential to accelerate student achievement
- ● Likely to have positive impact on student achievement
- ● Likely to have small positive impact on student achievement
- ● Likely to have a negative impact on student achievement

ES Effect size calculated using Cohen's *d*

CLASSROOM		ES
Classroom composition effects		
Detracking	🟡	0.09
Mainstreaming/inclusion	🟢	0.27
Multi-grade/age classes	🟡	0.04
Open vs. traditional classrooms	🟡	0.01
Reducing class size	🟢	0.21
Retention (holding students back)	🔴	-0.32
Small group learning	🔵	0.47
Tracking/streaming	🟡	0.12
Within class grouping	🟡	0.18
School curricula for gifted students		
Ability grouping for gifted students	🟢	0.30
Acceleration programs	🔵	0.68
Enrichment programs	🔵	0.53
Classroom influences		
Background music	🟡	0.10
Behavioral intervention programs	🔵	0.62
Classroom management	🟢	0.35
Cognitive behavioral programs	🟢	0.29
Decreasing disruptive behavior	🟢	0.34
Mentoring	🟡	0.12
Positive peer influences	🔵	0.53
Strong classroom cohesion	🔵	0.44
Students feeling disliked	🔴	-0.19

TEACHER		ES
Teacher attributes		
Average teacher effects	🟢	0.32
Teacher clarity	🔵	0.75
Teacher credibility	🔵	0.90
Teacher estimates of achievement	🔵	1.29
Teacher expectations	🔵	0.43
Teacher personality attributes	🟢	0.23
Teacher performance pay	🟡	0.05
Teacher verbal ability	🟢	0.22
Teacher-student interactions		
Student rating of quality of teaching	🔵	0.50
Teachers not labeling students	🔵	0.61
Teacher-student relationships	🔵	0.52
Teacher education		
Initial teacher training programs	🟡	0.12
Micro-teaching/video review of lessons	🔵	0.88
Professional development programs	🔵	0.41
Teacher subject matter knowledge	🟡	0.11

Key for rating

- 🔵 Potential to considerably accelerate student achievement
- 🔵 Potential to accelerate student achievement
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- 🟡 Likely to have small positive impact on student achievement
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ES Effect size calculated using Cohen's *d*

TEACHING: Focus on student learning strategies		ES
Strategies emphasizing student meta-cognitive/ self-regulated learning		
Elaboration and organization	●	0.75
Elaborative interrogation	●	0.42
Evaluation and reflection	●	0.75
Meta-cognitive strategies	●	0.60
Help seeking	●	0.72
Self-regulation strategies	●	0.52
Self-verbalization and self-questioning	●	0.55
Strategy monitoring	●	0.58
Transfer strategies	●	0.86
Student-focused interventions		
Aptitude/treatment interactions	●	0.19
Individualized instruction	●	0.23
Matching style of learning	●	0.31
Student-centered teaching	●	0.36
Student control over learning	●	0.02
Strategies emphasizing student perspectives in learning		
Peer tutoring	●	0.53
Volunteer tutors	●	0.26
Learning strategies		
Deliberate practice	●	0.79
Effort	●	0.77
Imagery	●	0.45
Interleaved practice	●	0.21
Mnemonics	●	0.76
Note taking	●	0.50
Outlining and transforming	●	0.66
Practice testing	●	0.54
Record keeping	●	0.52
Rehearsal and memorization	●	0.73
Spaced vs. mass practice	●	0.60
Strategy to integrate with prior knowledge	●	0.93
Study skills	●	0.46
Summarization	●	0.79
Teaching test taking and coaching	●	0.30
Time on task	●	0.49
Underlining and highlighting	●	0.50

TEACHING: Focus on teaching/instructional strategies		ES
Strategies emphasizing learning intentions		
Appropriately challenging goals	●	0.59
Behavioral organizers	●	0.42
Clear goal intentions	●	0.48
Cognitive task analysis	●	1.29
Concept mapping	●	0.64
Goal commitment	●	0.40
Learning goals vs. no goals	●	0.68
Learning hierarchies-based approach	●	0.19
Planning and prediction	●	0.76
Setting standards for self-judgement	●	0.62
Strategies emphasizing success criteria		
Mastery learning	●	0.57
Worked examples	●	0.37
Strategies emphasizing feedback		
Classroom discussion	●	0.82
Different types of testing	●	0.12
Feedback	●	0.70
Providing formative evaluation	●	0.48
Questioning	●	0.48
Response to intervention	●	1.29
Teaching/instructional strategies		
Adjunct aids	●	0.32
Collaborative learning	●	0.34
Competitive vs. individualistic learning	●	0.24
Cooperative learning	●	0.40
Cooperative vs. competitive learning	●	0.53
Cooperative vs. individualistic learning	●	0.55
Direct instruction	●	0.60
Discovery-based teaching	●	0.21
Explicit teaching strategies	●	0.57
Humor	●	0.04
Inductive teaching	●	0.44
Inquiry-based teaching	●	0.40
Jigsaw method	●	1.20
Philosophy in schools	●	0.43
Problem-based learning	●	0.26
Problem-solving teaching	●	0.68
Reciprocal teaching	●	0.74
Scaffolding	●	0.82
Teaching communication skills and strategies	●	0.43

TEACHING: Focus on implementation method		ES
Implementations using technologies		
Clickers	●	0.22
Gaming/simulations	●	0.35
Information communications technology (ICT)	●	0.47
Intelligent tutoring systems	●	0.48
Interactive video methods	●	0.54
Mobile phones	●	0.37
One-on-one laptops	●	0.16
Online and digital tools	●	0.29
Programmed instruction	●	0.23
Technology in distance education	●	0.01
Technology in mathematics	●	0.33
Technology in other subjects	●	0.55
Technology in reading/literacy	●	0.29
Technology in science	●	0.23
Technology in small groups	●	0.21
Technology in writing	●	0.42
Technology with college students	●	0.42
Technology with elementary students	●	0.44
Technology with high school students	●	0.30
Technology with learning needs students	●	0.57
Use of PowerPoint	●	0.26
Visual/audio-visual methods	●	0.22
Web-based learning	●	0.18
Implementations using out-of-school learning		
After-school programs	●	0.40
Distance education	●	0.13
Home-school programs	●	0.16
Homework	●	0.29
Service learning	●	0.58
Implementations that emphasize school-wide teaching strategies		
Co- or team teaching	●	0.19
Interventions for students with learning needs	●	0.77
Student support programs – college	●	0.21
Teaching creative thinking	●	0.34
Whole-school improvement programs	●	0.28

Key for rating

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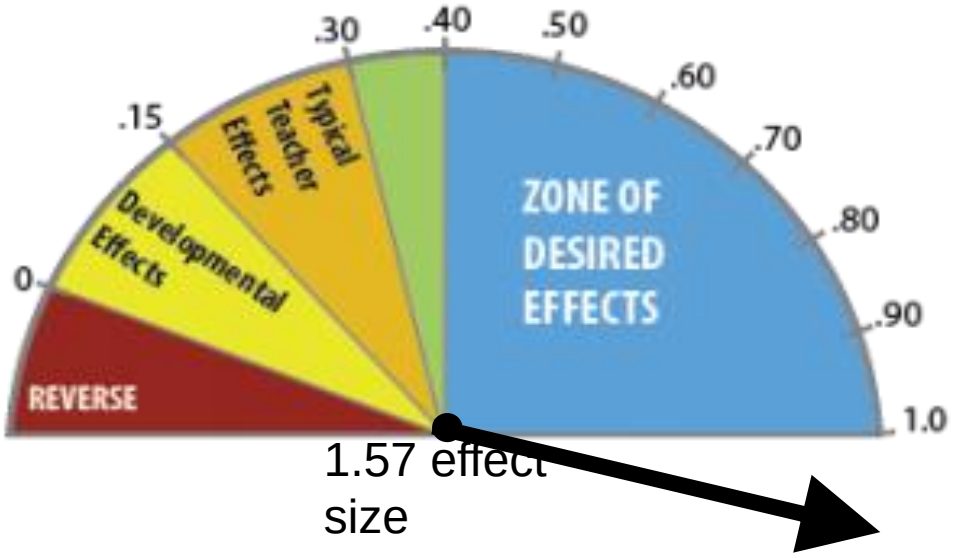
ES Effect size calculated using Cohen's *d*

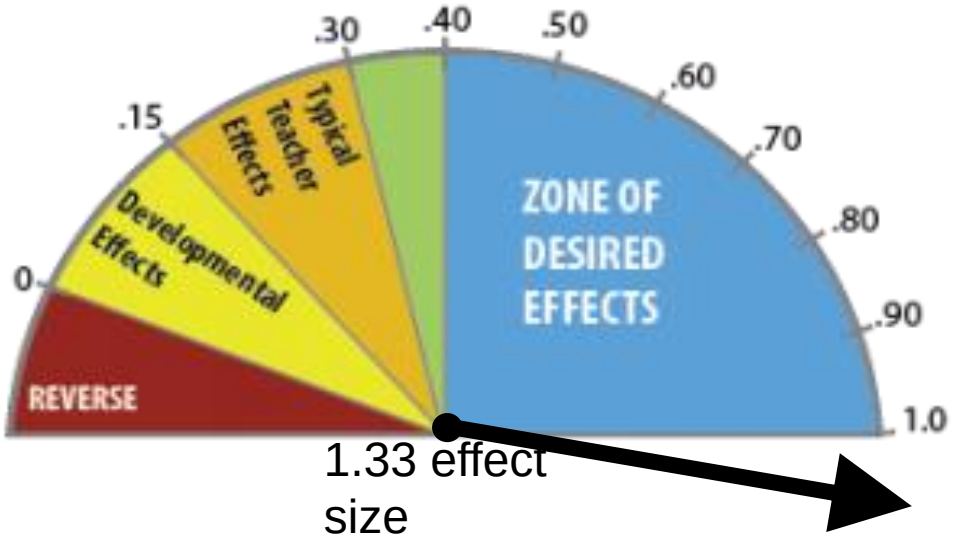
CORWIN

Teachers shared belief that through collective action, they can positively influence student outcomes, including impacting those who are disengaged and/or disadvantaged.



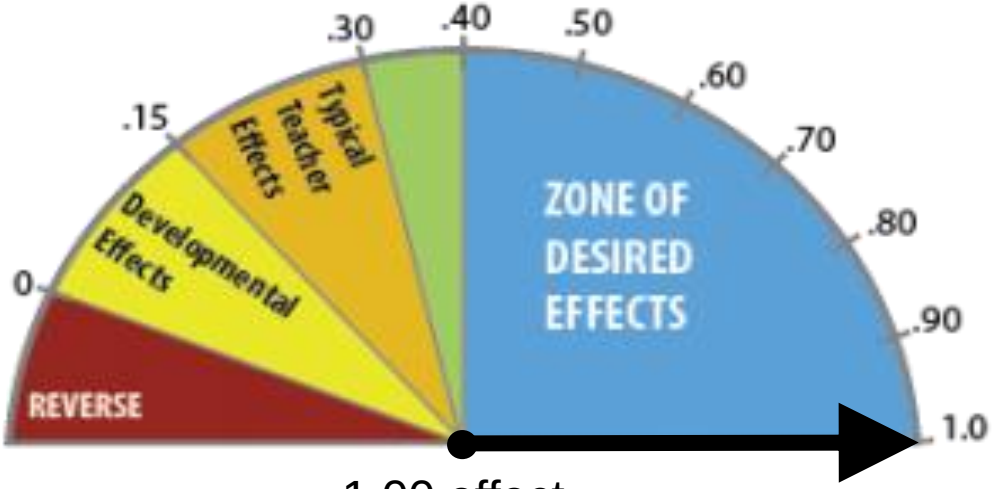
Collective Teacher Efficacy

- Students knowing about their chance of success
- Awareness of what they know about a subject



Self-Reported Grades

- Teachers ability to identify essential representations of subject
- Guiding learning through classroom interactions
- Monitoring learning and providing feedback
- Influence student outcomes

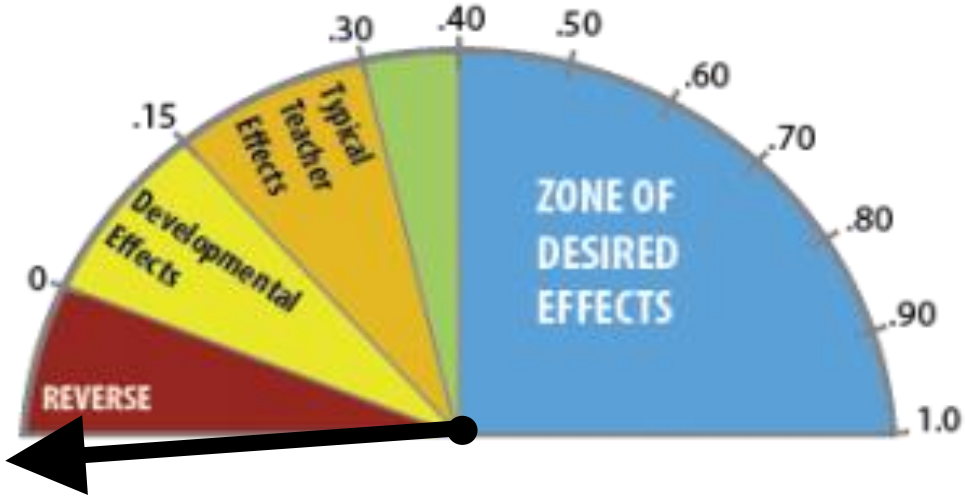


1.00 effect size

Instructional Quality

You had the child for a year, and you failed, now you're going to give him the same kind of curriculum, the same kind of strategies…

What that kid needs is not more, he needs different.
- John Hattie

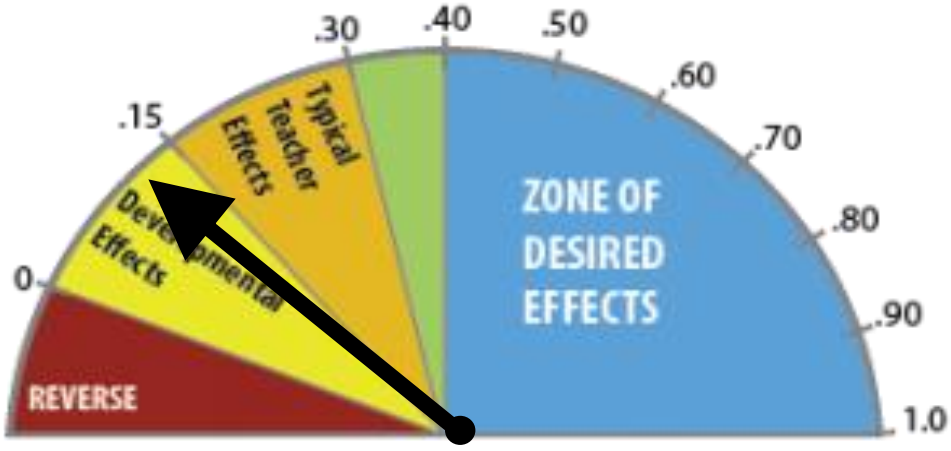


-0.17 effect size

Retention

The problem with tracking is the expectations it sets for kids.

It says to them very clearly, this is where you perform...

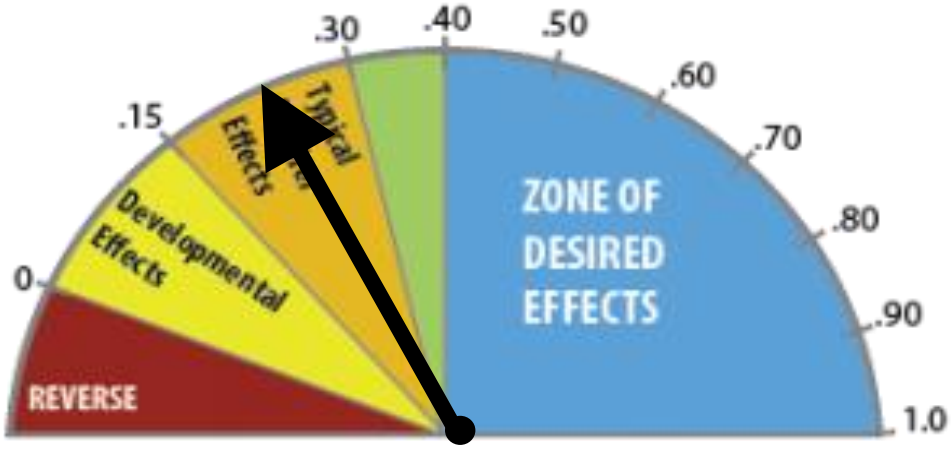


0.12 effect size

Quite often teachers only teach material that is relative to that tracking. - John Hattie

Ability Grouping

If you are going to reduce class size, the first thing we have to do is change **how we teach**. - John Hattie



.21 effect size

Class Size

The winners 2017

Rank	Influence	Effect size d (Dec 2017)	Effect size d (Aug 2017)	Subdomain	Domain
1	**Collective teacher efficacy**	1.57	1.57	Leadership	SCHOOL
2	**Self-reported grades**	1.33	1.33	Prior knowledge and background	STUDENT
3	**Teacher estimates of achievement**	1.29	1.62	Teacher attributes	TEACHER
4	**Cognitive task analysis**	1.29	1.29	Strategies emphasizing learning intentions	TEACHING: Focus on teaching/instructional strategies
5	**Response to intervention**	1.29	1.29	Strategies emphasizing feedback	TEACHING: Focus on teaching/instructional strategies
6	**Piagetian programs**	1.28	1.28	Prior knowledge and background	STUDENT
7	**Jigsaw method**	1.2	1.2	Teaching/instructional strategies	TEACHING: Focus on teaching/instructional strategies

Some exercises

Impact on achievement – Please rank in order to effect size

1 Ability grouping (school)

2 Class size (school)

3 Decreasing disruptive behaviour (school)

4 Feedback, A4L, formative assessment (teaching)

5 Homework (teaching)

6 Mentoring (teaching)

7 Not labelling students (teacher)

8 Self-report grades (student)

9 Socio-economic status (home)

10 Student control over learning (teaching)

11 Teacher-student relationships (teacher)

12 Team teaching (teaching)

13 Time on task (teaching)

14 Web-based learning (teaching)

Impact on achievement

1.44 (1st) Self-report grades (student)

0.90 (3rd) Feedback, A4L, formative assessment (teaching)

0.72 (11th) Teacher-student relationships (teacher)

0.61 (21st) Not labelling students (teacher)

0.57 (32nd) Socio-economic status (home)

0.38 (70th) Time on task (teaching)

0.34 (80th) Decreasing disruptive behaviour (school)

0.29 (88th) Homework (teaching)

0.21 (106th) Class size (school)

0.19 (111th) Team teaching (teaching)

0.18 (112th) Web-based learning (teaching)

0.15 (120th) Mentoring (teaching)

0.12 (121st) Ability grouping (school)

0.04 (132nd) Student control over learning (teaching)

Rank these 11 effects: (from 1 = highest effect to 11 = lowest effect)

1. **Reducing disruptive behavior in the class**
2. **Feedback**
3. **Acceleration of gifted students**
4. **Reading Recovery**
5. **Integrated curriculum programs**
6. **Homework**
7. **Individualized instruction**
8. **Ability grouping**
9. **Open vs. traditional classes**
10. **Retention (holding back a year)**
11. **Shifting schools**

Rank these 11 effects: Answers

1.	**Reducing disruptive behavior in the class**	**.86**
2.	**Feedback**	**.72**
3.	**Acceleration of gifted students**	**.60**
4.	**Reading Recovery**	**.50**
5.	**Integrated curriculum programs**	**.40**
6.	**Homework**	**.30**
7.	**Individualized instruction**	**.20**
8.	**Ability grouping**	**.10**
9.	**Open vs. traditional classes**	**.00**
10.	Retention (hold back a year)	-.16
11.	**Shifting schools**	**-.34**

Rank these 10 effects

based on Hattie's Research

A. Reciprocal teaching
B. Feedback
C. Student-teacher relationships
D. Ability grouping
E. Retention (hold back a year)
F. Concept mapping
G. Academic discourse
H. Cooperative learning
I. Homework (middle/high)
J. Individualized instruction

Ranking 10 effects: Answers

G. Academic Discourse	.82
B. Feedback	.75
A. Reciprocal Teaching	.74
C. Student-teacher relationships	.72
F. Concept mapping	.57
H. Cooperative learning	.41
I. Homework (in middle/high school)	.29
J. Individualized instruction	.22
D. Ability grouping	.12
E. Retention (hold back a year)	-.16

Influences on student learning

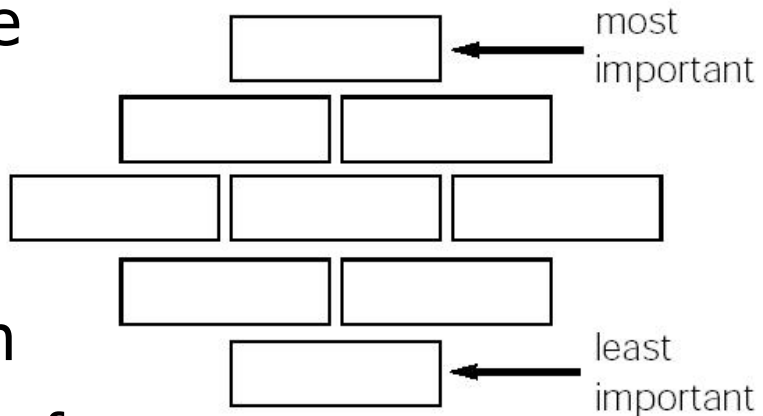
- Expectations
- Mastery Learning
- Homework
- Challenge of Goals
- FeedbacK
- Aims & Policies of the School
- Ability Grouping
- Peer Tutoring
- Teacher-Student Relationships

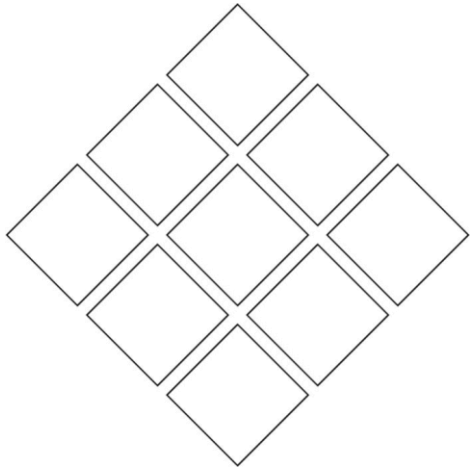
Diamond Nine Activity

With a partner discuss these ten factors that influence student achievement

Choose nine and place them in a diamond shape, in order of how great you think their positive influence is (on average)

Think about why they have this effect





Mastery Learning:

All children can learn when they focus on mastering tasks in a collaborative environment.

Appropriate learning conditions in the classroom include:

- High levels of cooperation between classmates;
- Focused teacher feedback that is both frequent and diagnostic;
- Variable time allowed to reach levels of attainment

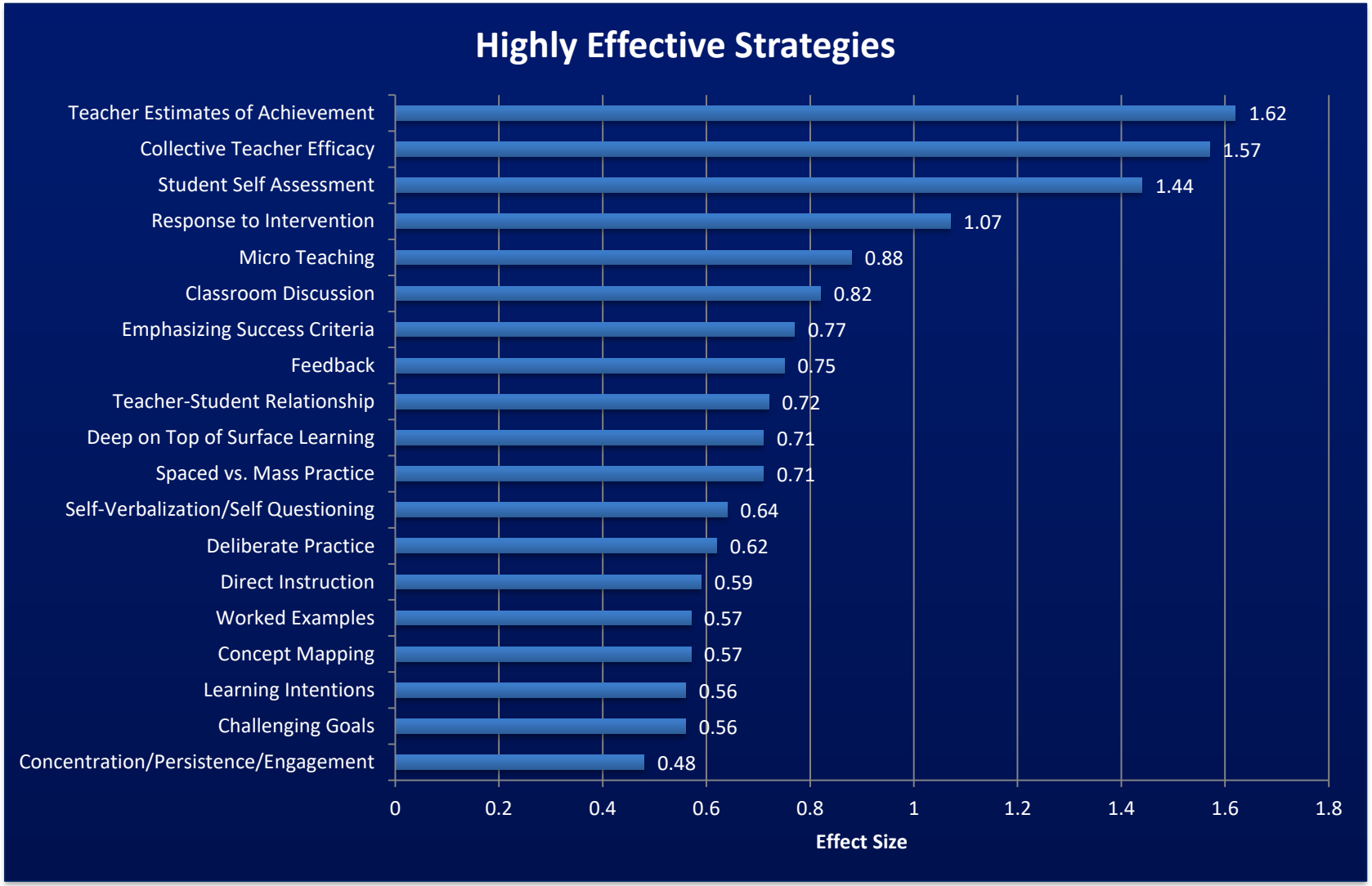
Influences on student learning

John Hattie 1999-2009 – research from 180,000 studies covering almost every method of innovation

	Effect Size
Feedback	0.73
Teacher-Student Relationships	0.72
Mastery Learning	0.58
Challenge of Goals	0.56
Peer Tutoring	0.55
Expectations	0.43
Homework	0.29
Aims & Policies of the School	0.24
Ability Grouping	0.12

Results since 2018

Conclusions


Highly Effective Strategies
Teacher Estimates of Achievement 1.62
Collective Teacher Efficacy 1.57
Student Self Assessment 1.44
Response to Intervention 1.07
Micro Teaching 0.88
Classroom Discussion 0.82
Emphasizing Success Criteria 0.77
Feedback 0.75
Teacher-Student Relationship 0.72
Deep on Top of Surface Learning 0.71
Spaced vs. Mass Practice 0.71
Self-Verbalization/Self Questioning 0.64
Deliberate Practice 0.62
Direct Instruction 0.59
Worked Examples 0.57
Concept Mapping 0.57
Learning Intentions 0.56
Challenging Goals 0.56
Concentration/Persistence/Engagement 0.48
0 0.2 0.4 0.6 0.8 1 1.2 1.4 1.6 1.8
Effect Size

The three major messages for teachers

Transparent goals	• **the more transparent the teacher makes the learning goals, then the more likely the student is to engage in the work needed to meet the goal.**
Success criteria	• **the more the student is aware of the criteria of success, then the more the student can see the specific actions that are needed to attain these criteria**
Rapid formative feedback	• **the more there is feedback about progress from prior to desired outcomes the more positive attributes to learning are developed**